NEW JERSEY
COMMERCE &
ECONOMIC GROWTH
COMMISSION

New Jersey Maritime Resources

Annual Report 1998

A Note from the Executive Director

The 1998 calendar year saw continued progress and increasing challenges for New Jersey Maritime Resources. Implementation of the Sediment Decontamination program in the early part of the year resulted in selection of five vendors who will initiate their projects during 1999. Maritime Resources also provided grants to several agencies for in-situ remediation projects, capital investment, and air quality monitoring programs.

1998 also saw completion of all of the scheduled US Army Corps of Engineers maintenance dredging projects in the Port of New York and New Jersey. Two of those projects, the Newark Bay Channels and the Arthur Kill Channel provided processed dredged material for remediation of an upland contaminated site in Kearny, New Jersey.

On August 31, 1998, the Department of Commerce and Economic Development became the New Jersey Commerce and Economic Growth Commission and New Jersey Maritime Resources was continued in the new independent State Commission. Administrative funding will continue to be provided by the State of New Jersey through the Commerce Commission, grants from Prosperity New Jersey, and the Port Authority of New York and New Jersey.

Since its inception, and through the end of 1998, this Office obligated more than $120 million of State and Port Authority funds for numerous projects, innovative technologies, and disposal operations. Staff continued to work with more than a baker‘s dozen of Federal and State agencies and continues to coordinate almost $2 billion in Federal funds.

Toward the end of the year, in a trip to Washington led by the business community of New Jersey, Maritime Resources assisted in securing the final Federal commitment to completion of the Kill van Kull dredging project by the year 2004. This project will require more than $500 million in Federal funds and the first increment of $60 million was committed by the Vice-President of the United States as he witnessed the signing of the Project Cooperation Agreement at ElizabethPort.

Next year looks to be just as exciting.

Frank M. McDonough, Esq.
Executive Director, New Jersey Maritime Resources

1998 Highlights

Regina Maersk **-** The Regina Maersk made her debut in the Port of New York & New Jersey in July. This new class of ship is over 3 1/2 football fields long, is capable of carrying 6000 boxes, and is representative of the future of the maritime industry.

Sediment Decontamination RFP Process **-** In March of 1998 NJMR published an RFP in conjunction with the NJ Department of Treasury to solicit proposals for demonstration of sediment decontamination technologies. Proposals were received in June and selection was finalized in December. *(See page 3)*

Perth Amboy Project **-** NJMR funded the processing and transport of 19,029 cy of dredged material to the Bark Camp Mine Reclamation site in Pennsylvania to demonstrate the use of dredged materials in strip mine reclamation. This project assisted the City of Perth Amboy in the redevelopment of their waterfront through a Green Acres funded expansion of their municipal marina. *(See page 4)*

New Jersey Skimmer Boat **-** NJMR provided Passaic Valley Sewerage Commission with a grant to purchase a "skimmer boat." Skimmer boats are equipped with a scoop and conveyor system that removes floatable debris from the water. Debris enters the waterways through stormdrains and by being blown into the water from roadways and landfills. Any debris removed is debris that doesn't end up on New Jersey's beaches and shorelines.

PORTS **-** The National Ocean Services' Physical Oceanographic Real-Time System provides accurate real-time oceanographic and meteorologic data tailored to the specific needs of the Port community. As national funds were no longer available to support this system, NJMR provided $150,000 to fund continued operation until a self-sustaining revenue stream can be determined.

NJ Metro Mall **-** Now called the Jersey Gardens Mall, this Elizabeth NJ landfill was active many years ago and abandoned. OENJ Corporation bought the site, obtained a closure plan from NJDEP and redeveloped the site for a shopping mall and parking lot. The parking lot is directly over the old landfill and was capped with amended dredged material from the Port of New York & New Jersey.

Conferences **-** On June 2, NJMR co-sponsored a Remediation of Brownfields/Landfills: Using Innovative Technology and Non-conventional Materials, and on September 18, co-sponsored a Fall Workshop with the Hudson-Delaware Chapter of the Society of Environmental Toxicology and Chemistry (SETAC) to discuss the status of research and policy on contaminated sediments in the Port of New York & New Jersey. Both events were a great success. Additionally, NJMR participated in over twenty-five other conferences and seminars including: The national SETAC meeting, an annual event bringing together scientists from all over the world, where NJMR presented a paper on the current status of the management and assessment of contaminated sediments and dredged materials in the Harbor, the South Kearny Industrial Society luncheon, the Environmental Management and Technology Annual Conference in Atlantic City, the New Jersey Business & Industry Association dredging task force meeting, the NJ Society of Environmental Economic Development 17th Annual Governmental Affairs Conference, the 1998 Hudson County Economic Summit, as well as a New Jersey Transportation Planning Authority event.

45' NOW!! **-** Towards the end of 1998, the business community of New Jersey under the leadership of the New Jersey State Chamber of Commerce, the Regional Business Partnership, and Maher Terminals organized a consortium of management and labor interests to secure a Federal commitment to fund and expedite the Kill van Kull deepening project. NJMR was instrumental in organizing, supporting, and traveling with the delegation as it met with our Congressional representatives and the Clinton Administration. The 45'NOW!! coalition was successful in gaining a Federal commitment to complete the deepening project by the year 2004. Vice-President Al Gore traveled to New Jersey to witness the signing of the Project Cooperation Agreement and to announce the initial funding of $60 million for the $733 million project.

Port of New York and New Jersey

The Port of New York & New Jersey saw major developments this year as major dredging projects in Newark Bay and the Arthur Kill were completed, the data gathering phase of the Investment Options Analysis was concluded, the Harbor Navigation Study continued apace, and the Port Authority Board of Commissioners committed the necessary local funding to continue the Kill van Kull deepening to 45'. Additionally, NJMR, working in partnership with staff at the Port Authority of New York & New Jersey, initiated studies of the Claremont and Port Jersey Channels for future construction, completed the maintenance dredging of the inner channel at Port Jersey and initiated and completed the outer channel maintenance project to 38'.

While the Navigation Study, being completed by the United States Army Corps of Engineers in partnership with the two states and the Port Authority of New York & New Jersey, will provide significant direction for the future, arguably the most important project completed this year was the Port Investment Options Analysis. The goals of this study were to develop a long-term investment strategy, identify appropriate capital requirements, create a public-private investment package, develop a phased channel dredging program, implement a sound environmental strategy and assure regional consensus for the Port of the future. The study analyzed not only the projected growth in cargo trade in the Port, but also the sources of that growth and the likely shifts in world trade patterns between now and the year 2040. The study looked at market demand, comparative costs, and harborside and landside investments required to meet that demand.

The study then evaluated sites in the Harbor for capital investment ranking them according to feasibility, economic impact, transportation costs, local traffic impacts, land use compatibility, construction costs and time, environmental impacts and mitigation, and public access. The result was a forecast which reflected an increase in tonnage from 14.8 million tons of total general cargo from 1995 to more than 86 million tons in the year 2040. Total container tonnage was expected to increase from approximately 12 million tons to 70 million tons. This represents, in container cargo, a doubling and tripling again of containers with a potential increase of more than 170,000 jobs in New Jersey alone. Meanwhile, as if to emphasize the point, Maersk, Inc. steamship lines brought the Regina Maersk through the harbor during the month of July. With a fully loaded draft of 47' and channels of only 40' the Regina came in light-loaded and squeezed under the Bayonne Bridge with only 5' of air draft to spare.

It is anticipated that the Board of Commissioners of the Port of New York & New Jersey will review the investment options analysis and make its selection in 1999 at which point those choices will be integrated into the Harbor Navigation Study being conducted by the Corps.

DREDGING PROJECTS COMPLETED IN 1998

Perth Amboy Marina: 19,050 cy
Compton's Creek, Belford: 70,000 cy
Union Dry Dock, Hoboken: 81,000 cy
Port Jersey Outer Channel, Bayonne: 166,000 cy
Newark Bay Channel, Newark: 640,000 cy
Arthur Kill Channel, Linden: 913,000 cy

Ports Along the Delaware River and Bay

A significant project was continued by the Delaware River Port Authority this year. DRPA has requested a commitment from the State of New Jersey in regards to the Delaware River Channel Deepening Project, having received a commitment from the states of Pennsylvania and Delaware.

It is estimated that during the construction phase of the project, there will be a generation of 1,600 new jobs, $204 million in wages, and tax revenue for the State will be $16 million. The overall benefit to the region will be the access of 45' channels which will enable the use of deeper draft vessels for exporting scrap and importing steel, thus reducing ocean transportation costs. Economic and environmental benefits will result from decreased lightering operations of petroleum. In addition, Egg Island Point wetlands (135 acres) will be restored with sand dredged from the bay. The DPFTF will be considering this project at the January 26, 1999 meeting.

Additionally, Delaware River ports continued their role as a leader in fruit, wood products, steel, paper, meat, cocoa, and scrap metal. The Delaware River is the 4th busiest port on the East Coast, and is the 2nd largest petroleum center in the country. The New Jersey maritime community along the Delaware is projected to experience continued growth in 1999.

Dredging Project Facilitation Task Force

PROJECTS APPROVED BY THE DPFTF 1998

Absecon Channel
$750,000

Cape May Mosquito Beach Project
$32,000

Intercoastal Waterway Feasibility Study
$1,440,000

Margate Channel Improvements
$700,000

Pennsylvania Mine Reclamation Project
$20,000,000

The Dredging Project Facilitation Task Force (DPFTF) created by the 1996 Port Revitalization Act, of which this Office is the administrator, held eight public meetings and approved several projects this calendar year. The DPFTF has approved several non-Port projects in Atlantic, Cape May, Ocean, and Burlington counties, approved funding to move forward with the second phase of the Pennsylvania Mines Reclamation Project, which involves the transport and placement of dredged material for strip mine reclamation, and approved the first *New Jersey Statewide Dredging Plan*.

In addition, the DPFTF has concluded the selection process for the Sediment Decontamination Demonstration RFP project. The process involved approval of the *Sediment Decontamination Demonstration RFP*, appointment of a sub-committee to interview the prospective vendor proposals, and Executive Sessions to review the Technical Review Committee and sub-committee reports. The Task Force announced the awards at the December 22, 1998 public meeting and will continue to monitor the project through its completion.

Sediment Decontamination RFP

RFP AWARDS

- BEM Systems, Inc.
- The Joint Venture consisting of the Institute of Gas Technology & ENDESCO Services, Inc.
- JCI/Upcycle, Inc.
- NUI Environmental Group, Inc.
- The Joint Venture consisting of Roy F. Weston, Inc., ECDC (SK Services), & BioGenesis of New

NJMR staff reviewed 15 proposals, of which 9 were selected as being responsive to the requirements of the Sediment Decontamination RFP. These nine proposals were reviewed by a Technical Review Committee comprised of NJMR staff and technical experts from the USEPA, NJDEP, Port Authority of New York & New Jersey, USACE, the Hudson River Foundation and Rennsalear Polytechnic Institute. The TRC produced a report outlining their recommendations which was given to NJMR, Department of Treasury, and the DPFTF. The DPFTF then interviewed the 9 proponents and produced a report outlining overall recommendations for funding. Five vendors were selected for contract negotiations, representing three decontamination technologies. The technologies to be demonstrated are sediment washing, thermal destruction, and "georemediation" (chemically enhanced mineralization). Contract negotiations will begin in January of 1999. Pilot projects (200 gallons) will be conducted first, followed by a data review by the TRC. Vendors will then be selected to perform demonstration projects of 30,000-50,000 cubic yards each, utilizing the successful technologies. Dredged material for these projects will be provided by entities located on Newark Bay, north of the Port Authority terminals.

Maritime Advisory Council

The Maritime Advisory Council met on a quarterly basis in 1998, keeping members informed and up to date on issues of importance to New Jersey's maritime business, academic, and environmental communities. The Council heard informative presentations on topics from the Tuckerton Seaport, the Southern New Jersey Partnership for Economic Development, the Maritime Exchange, the New Jersey Department of Environmental Protection, the US Army Corps of Engineers, the South Jersey Port Corporation, the USS Battleship New Jersey Commission, the Mid-Atlantic Fisheries Management Council, the Harbor Operations, Safety and Navigation Committee, Norfolk Southern and CSX, New Jersey Transit, New Jersey Maritime Resources, and others.

In March of 1998, the Council met to discuss issues related to funding for Fiscal Year '99 and the Water Resources Development Act. Requirements were compiled into testimony to the Subcommittee on Energy and Water Development. In addition, the Maritime Advisory Council published its first Newsletter in April of this year. The Newsletter contained an outline of testimony for FY '99, as well as other information regarding the Council. The Council will focus support on the passage of a WRDA '99, and the Harbor Maintenance Tax proposal in 1999.

Innovative Technology, Research & Development

HARBOR SEDIMENT STRATEGIES

- Decontamination Technologies
- Sediment Management & Engineering
- Wetlands/Habitat Development
- Toxics Workplan/Contaminant Trackdown
- CSO Abatement/Landfill Closure
- Newark Bay Skimmer Project
- Innovative Technologies

The Joint Dredging Plan for the Port of New York and New Jersey which was drafted by NJMR and executed by Governor Whitman on October 7, 1996 requires this Office to investigate, study, and develop innovative technologies for dredged materials management. The Port Revitalization Act of 1996 requires this Office to develop innovative disposal and decontamination technologies for use in dredging operations. Since this Office was created in 1995 more than $120 million has been committed to such projects. The following is a list of projects currently in operation or under development.

NJ Toxics Workplan - NJMR is sponsoring an intensive monitoring program in the Passaic, Hackensack, and Raritan rivers, the Arthur Kill, Kill van Kull and Newark Bay to determine the magnitude and sources of pollution entering these waterways. This NJDEP monitoring effort will provide data to trackdown and prioritize remediation of pollutant sources in the region that are causing contamination of river and bay sediments. Some data may result in enforcement action being taken to abate ongoing sources. Scientists from Rutgers, Stevens Institute of Technology, and the US Geological Survey are providing technical and field support for the effort. The project is being closely coordinated with efforts undertaken by the NY Department of Environmental Conservation.

Air Quality Monitoring Program - The NJ Marine Sciences Consortium (NJMSC) and NJMR are working closely to develop a plan to determine whether upland processing of contaminated dredged material impacts local air quality. Scientists from Rutgers, Stevens Institute of Technology, and the NJ Institute of Technology will place ultra-sensitive monitoring equipment at the site of the OENJ dredged materials processing facility in Bayonne, NJ. This project should be underway prior to the initiation of processing activities at the site, in order to establish a record of baseline conditions. Air quality around the site will be compared to a site within the residential district of the city.

Air Guard Demonstration Project - NJMR is contracting with Ocean and Coastal Consultants to build pneumatic sediment barriers at two NJ businesses in the Port. IMTT of Bayonne and TOSCO of Linden have expressed interest in hosting demonstrations of this innovative technology to reduce sedimentation of berthing areas. The technology is deceptively simple: a perforated pipeline is laid around the berthing area and air is continually forced into the pipe, creating a wall of bubbles. Both systems will be carefully monitored to evaluate effectiveness at reducing sedimentation and environmental impacts.

PROPAT Demonstration Project - In coordination with NJDEP's Innovative Technologies program, NJMR is co-sponsoring a demonstration of the use of PROPAT in stabilization of dredged material for use in cover and fill operations. PROPAT is a product produced by Hugo Neu Schnitzer of Jersey City from the shredded interiors of junk cars. Once proven successful, this recycled material will provide the physical and chemical stabilization required to turn dredged material into a workable manufactured soil for use as non-structural fill in brownfields development projects. PROPAT has already been used successfully as intermediate landfill cover.

Harbor Contaminant Modelling - NJMR is working on a plan to develop a state-of-the-art hydrodynamic, sediment transport and contaminant fate and transport model of the NY & NJ Harbor. The model will be used to predict the overall environmental impacts of management actions proposed for the Harbor, and to predict the time required for remediation of Harbor sediments, particularly dredged material, under various management strategies. The model will be calibrated using data collected from the NJ Toxics Workplan, the NY Toxics Workplan, and existing data on sediment quality from the USEPA, USACE and NOAA.

NJDOT Berm Project - In conjunction with NJDOT, NJMR is sponsoring a research project to evaluate the use of processed dredged material in roadway construction. In the fall of 1998, 83,000 cubic yards of dredged material was removed from the Union Dry Dock facility in Hoboken, NJ and transported to the OENJ site in Elizabeth. The material was stabilized, stockpiled and will be used to construct embankments designed to model those used in roadway construction projects. The Sediment and Dredged Material Technology Institute designed and evaluated the appropriate mixtures for stability. During the construction of the berm and during a 6-month monitoring period, Sadat Associates will collect samples of sediment, airborne dust and runoff for the purpose of performing a human health and ecological risk assessment on the use of dredged materials in transportation projects. NJDOT will evaluate all of the data on berm stability and environmental risk to develop a strategy to use up to 700,000 cubic yards of dredged materials in transportation projects per year.

Habitat Restoration - NJMR is working with consultants at Hart Crowser, Inc. to develop a project to restore mudflats and intertidal habitat in the Claremont Channel, Jersey City. The west end of the channel will be reshaped and filled as necessary using dredged material from proposed channel maintenance work to develop a vibrant salt marsh habitat. Existing non-native invasive plants and trash will be removed and the area planted with appropriate native estuarine reeds and grasses.

Dredged Materials Management Projects

Pennsylvania Mines Reclamation Project - The State of Pennsylvania is under USEPA mandate to close and remediate over 250,000 acres of abandoned strip mines throughout the State. Currently the PADEP Bureau of Abandoned Mines Reclamation has permitted the placement of 550,000 cubic yards of manufactured soil made from dredged material at a research site in Penfield, Pennsylvania. NJMR has worked closely with Consolidated Technologies, Inc. over the past two years demonstrating the viability of this management strategy. A positive outcome should result in the PADEP's issuance of a general permit to allow widespread use of dredged material in reclamation projects. Should the general permit be granted, the estimated amount of dredged material capacity exceeds 1 billion cubic yards. A pilot project of 19,050 cubic yards of contaminated dredged material from the Perth Amboy Municipal Marina was successfully completed in September of 1998.

Claremont Channel - A state-owned navigation channel located in Upper New York Bay. NJMR is sponsoring a number of demonstration projects in conjunction with Hugo Neu Schnitzer, a scrap metal processing company located on the channel. Approximately 1.2 million cubic yards of material will be removed from the channel and used in several ways: as remediation material for the Pennsylvania Mines Project, in a brownfield development on Caven Point, in a habitat enhancement project at the west end of Claremont Channel, and disposed of in the Newark Bay Confined Disposal Facility. NJMR is currently committed to sending approximately $20 million on the project, with Hugo-Neu providing the remainder of the $45 million redevelopment cost, which includes substantial pier reconstruction at the site.

Processing Facility - NJMR has developed a plan to design, build, and operate a dredged materials processing facility in the Port District. The facility will be designed to process up to 500,000 cubic yards of material annually and will produce a stabilized manufactured soil. The State will contract the design and construction of the facility in one contract and the operation of the facility in another. The material processing procedures, tipping fees, and sale price of the product will be dictated by contract. This facility will ensure supply of processed dredged material for roadway and brownfield projects, as well as ensure that a low-cost alternative is available for small quantity generators such as marinas.

Sub-Channel Cells - NJMR is a cooperating agency with the Port Authority of NY & NJ and the US Army Corps of Engineers (USACE) on an ambitious project to dig cells in Newark Bay, below the level of the existing navigation channels. The cells will be used to safely dispose of over 9 million cubic yards of contaminated dredged material unsuitable for ocean placement at the Historic Area Remediation Site (HARS) off Sandy Hook. The success of this project is crucial to the overall success of the Kill van Kull, Newark Bay, and Arthur Kill deepening projects currently underway to provide the required 45' channel depth for containerships.

Cape May Mosquito Commission - NJMR is funding a beach replenishment and restoration project in Cape May County at the Green River estuary. Storms and neglect have eroded the beach which protects the Green River estuary along the Delaware River. The estuary is managed for mosquito control by the Cape May Mosquito Commission. Sandy dredged material from local navigation projects will be used in the restoration.

Bayonne Golf Course - Follow-up to the success of the Elizabeth landfill closure and development, OENJ Corporation is planning to develop another brownfield site in Bayonne, NJ. The site contains the now unused Bayonne City landfill and an old PSE&G facility. Four million cubic yards of dredged materials will be used to cap and fill the site in preparation for the construction of a golf course.

DREDGING PROJECTS ANTICIPATED IN 1999

- Citgo, Linden: 35,000 cy
- Motiva, Newark: 40,000 cy
- Amerada Hess, Newark: 50,000 cy
- Amerada Hess, Bayonne: 50,000 cy
- Stratus Petroleum, Newark: 18,000 cy
- PA Reach A, Newark: 100,000 cy
- PA Reach B,C,D, Newark: 120,000 cy
- PA Auto Marine Terminal, Bayonne: 20,000 cy
- Claremont Channel, Jersey City: 1,200,000 cy
- USACE Keyport Harbor: 20,000 cy
- USACE South Shooters: 220,000 cy

Koppers Coke/Seaboard - This site is another successful brownfield redevelopment project located in Kearny. To date over 1.4 million cy of dredged material has been placed on this abandoned industrial site. A slurry wall has been installed to stop possible contaminants from leaching into the Hackensack River, and another 2.6 million cy of dredged materials will be used to fill, finish and cap the site. Once capped, the site will be available for new industrial or commercial development.

Minish Park - A riverfront enhancement project sponsored by the USACE, the USEPA and the NJDEP. Approximately 5,000 cy of highly contaminated river sediment will be removed during the installation of new shoreline bulkheads. Using newly developed decontamination technologies, the sediment will be treated to remove contaminants and the remaining sediment used to manufacture topsoil cover for amended dredged material at the aforementioned Koppers site. NJMR is providing funding for the decontamination of the sediment.

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NJMR Also Enjoys Working With:

- *Tidelands Resource Council*
- *NJ Marine Sciences Consortium*
- *NJ Sea Grant*
- *Dredged Materials Management Integration Workgroup (HEP)*
- *National Dredging Task Force, US Maritime Administration*
- *Tri-State Port Advisory Committee*
- *NJDOT Beneficial Use Demonstration Project Team*
- *New York Harbor Navigation Study (USACE)*
- *New York Harbor Corps/Partnership*
- *Deep-Draft Waterways/Ports Committee, Permanent International Association of Navigation Congresses, U.S. Section*
- *Western Dredging Association Environmental Commission*
- *Port of NY & NJ Investment Options Plan*
- *National Shellfisheries Association*
- *Atlantic States Marine Fisheries Commission (subcommittee)*
- *Society of Environmental Toxicology & Chemistry*
- *Harbor Safety, Navigation & Operations Committee*
- *Defense Asset Conversion Committee*
- *NY/NJ Harbor Estuary Program*
- *NJ Water Environment Federation*
- *Maritime Association of NY & NJ*
- *NJ Marine Trades Association*
- *NJ Alliance for Environmental Educators*
- *The Local Redevelopment Authority (MOTBY)*

More Maritime Facts

- NJ is the 9th largest exporting state
- NJ is the 8th largest exporter to Japan & SE Asia
- NJ exports to over 146 different countries
- NJ boasts 76 ports & terminals throughout the state
- The Port of New York & New Jersey is the 3rd largest port in North America
- 70,000 manufacturing jobs in New Jersey depend on the Port of New York & New Jersey
- New Jersey's commercial fishing industry is worth over $1b to our economy
- Recreational fishing expenditures by state residents alone total over $668m/year
- USCG Center Cape May is the 3rd largest of all USCG stations, and is the only Coast Guard recruit training facility in the US
- Protection of our natural resources supports a $22b tourism industry in NJ
- Boat Building in New Jersey directly employs over 3000 people
- One Power Boat Race in Point Pleasant brings over 250,000 visitors, and $1.5m in revenue